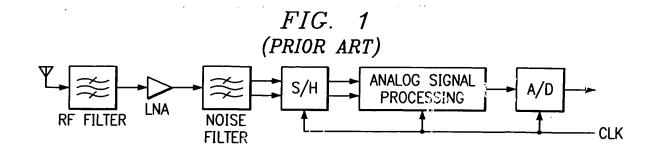


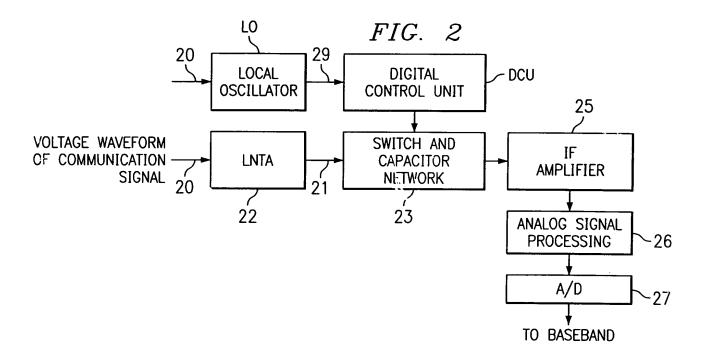
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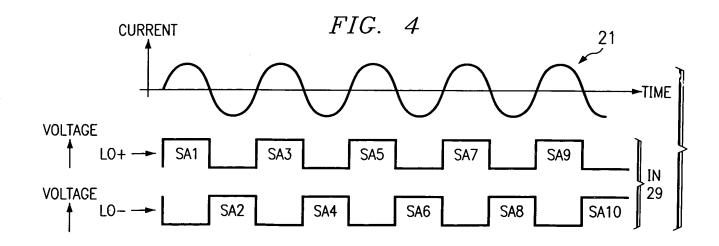


1/17

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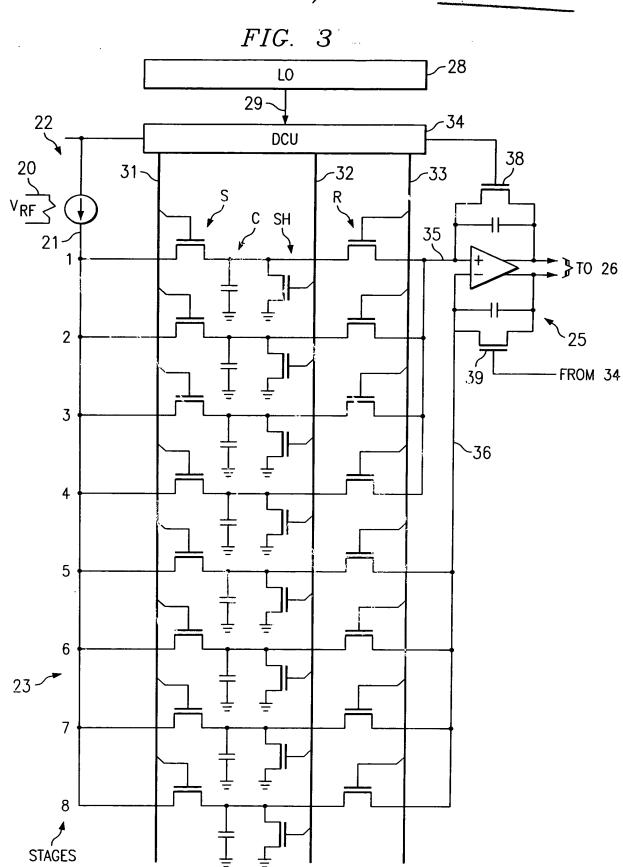








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-SH7

R8

SH8

VBIAS

**VBIAS** 

С

<u>|S</u>8

8

STAGES



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FIG. 5

SAMPLE	SWITCHES CLOSED
SA1	S1 AND R8
SA2	S5 AND R1
SA3	S2 AND R5
SA4	S6 AND R2
SA5	S3 AND R6
SA6	S7 AND R3
SA7	S4 AND R7
SA8	S8 AND R4
SA9	S1 AND R8
SA10	S5 AND R1
SA11	S2 AND R5
	•
•	•

FIG. 5A

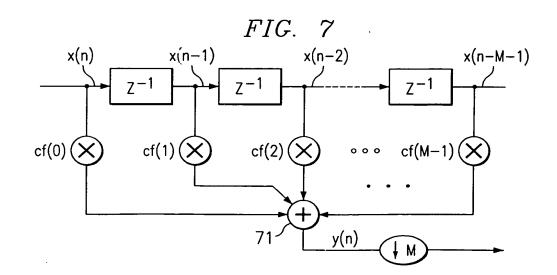
SAMPLE	SWITCHES CLOSED FOR SAMPLING	SWITCHES CLOSED FOR READ OUT
SA1	S1	R3,R4,R7,R8
SA2	S5	-do-
SA3	S2	-do-
SA4	S6	-do-
SA5	S3	R1,R2,R5,R6
SA6	S7	-do-
SA7	S4	-do-
SA8	S8	-do-
SA9	S1	R3,R4,R7,R8
SA10	S5	-do-
:	•	•
		•



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FIG. 6

SAMPLE	SWITCHES CLOSED
SA1	S1 AND R4 AND R8
SA2	S5 AND R8
SA3	S1
SA4	S5 AND R1
SA5	S2 AND R1 AND R5
SA6	S6 AND R5
SA7	S2
SA8	S6 AND R2
SA9	S3 AND R2 AND R6
SA10	S7 AND R6
SA11	S3
SA12	S7 AND R3
SA13	S4 AND R3 AND R7
SA14	S8 AND R7
SA15	S4
SA16	S8 AND R4
SA17	S1 AND R4 AND R8
SA18	S5 AND R3
SA19	S1
SA20	S5 AND R1
SA21	S2 AND R1 AND R5
:	:
•	•





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6/17

	T	1
SAMPLE	SWITCHES CLOSED	SWITCHES CLOSED
SAIVIT LE .	FOR SAMPLING	FOR READ OUT
SA1	S1 .	R3,R4,R7,R8
SA2	S5	-do-
SA3	S1	do
SA4	S5	-do
SA5	S2	-do-
SA6	S6	-do-
SA7	· S2	-do
SA8	S6	-do-
SA9	S3	R1,R2,R5,R6
SA10	S7	-do-
SA11	S3	do
SA12	S7	-do
SA13	2 <sub>t</sub> r	-do-
SA14	S8	-do-
SA15	S4	-do-
SA16	S8	-do-
SA17	S1	R3,R4,R7,R8
SA18	S5	-do-
SA19	S1	-do-
S.A20	S5	-do-
:	•	•
•	•	•

FIG. 6A

FIG. 8

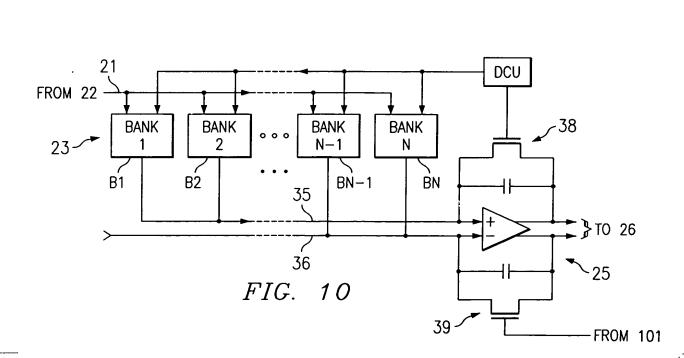
(1/2)x(n)+(1/2)x(n-1)

SAMPLE	SWITCHES CLOSED
SA1	S1,S2,R4 AND R7
SA2	S5,S6,R1 AND R8
SA3	S3,S4,R2 AND R5
SA4	S7,S8,R6 AND R3
SA5	S1,S2,R4 AND R7
SA6	S5,S6,R8 AND R1
SA7	S3,S4,R2 AND R5
SA8	S7,S8,R6 AND R3
•	•
•	



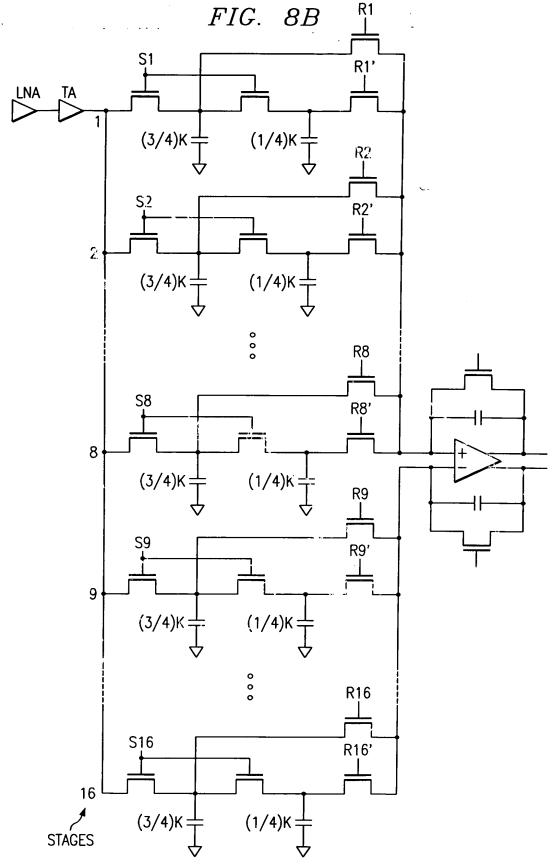
FIG. 8A

SAMPLE	SWITCHES CLOSED FOR SAMPLING	SWITCHES CLOSED FOR READ OUT
SA1	S1	R5',R6,R7,R8'
SA2	S9	-do-
SA3	S2	-do-
SA4	S10	do
SA5	S3	R7',R8,R1,R2'
SA6	S11_	-do-
SA7	S <b>4</b>	-do-
SA8	S12	-do-
SA9	S5	R1',R2,R3,R4'
SA10	S13	-do-
SA11	S6	-do-
SA12	S14	-do-
SA13	<b>S</b> 7	R3',R4,R5,R6'
SA14	S15	-do-
SA15	S8	-do-
SA16	S16	-do-
SA17	S1	R5',R6,R7,R8'
SA18	S9	-do-
SA19	S2	-do
SA20	S10	-do
	•	•





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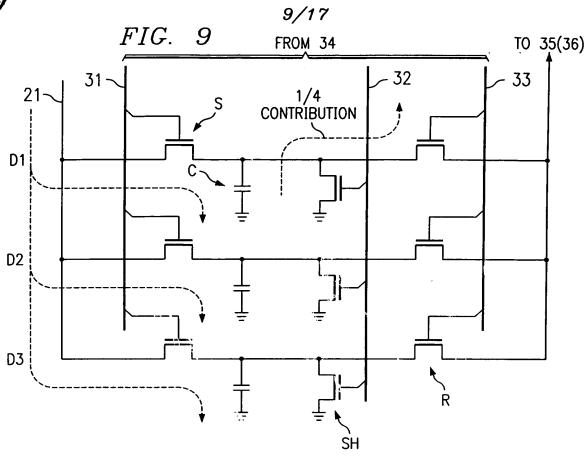
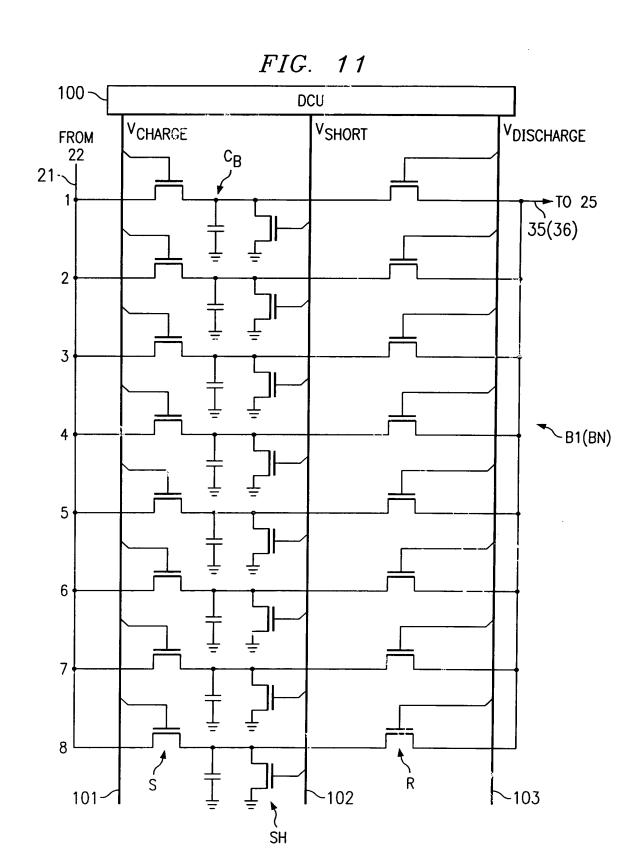


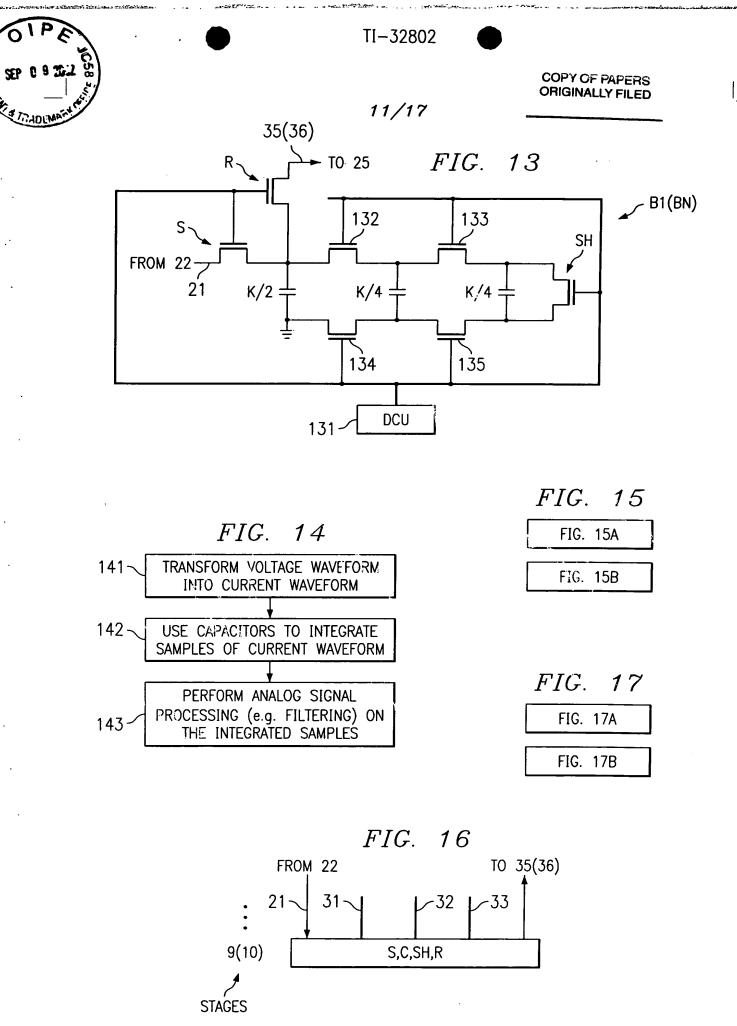
FIG. 12

SAMPLE	S1-S8 CLOSED	R1 AND R2 CLOSED	R3 CLOSED	SH1SH8 CLOSED
SA1	B1	<del></del>		
SA2	B5	B1		
SA3	B2	85	B1	
SA4	B6	B2	B5	B1
SA5	B3	B6	B2	B5
SA6	B7	B3	B6	B2
SA7	B4	B7	83	В6
SA8	B8	B4	B7	В3
SA9	B1	B8	B4	<b>B</b> 7
SA10	B5	B1	B8	B4
SA11	B2	B5	B1	B8
SA12	B6	B2	B5	B1
•	•	:	•	•
4 .	•	•	•	•

(1/4)x(n)+(1/8)x(n-1)

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### FIG. 15A

SAMPLE	SWITCHES CLOSED
SA1	S1
SA3	S2
SA5	S3
SA7	S1
SA9	S2
SA11	S2 S3
SA13	S1
SA15	S2
SA17	S3
SA19	S4 AND R1
SA21	S2 AND R1
SA23	S3 AND R1
SA25	S4 AND RI
SA27	S2 AND R1
SA29	S3 AND R1
SA31	S4 AND R1
SA33	S2 AND R1
SA35	S3 AND R1
SA37	S4 AND R2
SA39	S1 AND R2
SA41	S3 AND R2
SA43	S4 AND R2
SA45	S1 AND R2
SA47	S3 AND R2
SA49	S4 AND R2
SA51	S1 AND R2
SA53	S3 AND R2
SA55	S4 AND R3
SA57	S1 AND R3
SA59	S2 AND R3
SA61	S4 AND R3
SA63	S1 AND R3
SA65	S2 AND R3
SA67	S4 AND R3
SA69	S1 AND R3
SA71	S2 AND R3
SA73	S3 AND R4
SA75	S1 AND R4
SA77	S2 AND R4
SA79	S3 AND R4
SA81	S3 AND R4 S1 AND R4 S2 AND R4
SA83	S2 AND R4
SA85	S3 AND R4
SA87	S1 AND R4
SA89	S2 AND R4

### FIG. 15B

CAO1	C7 AND D4
SA91	S3 AND R1
SA93	S4 AND R1
SA95	S2 AND R1
SA97	S3 AND R!
SA99	S4 AND R1
SA101	S2 AND R1 S3 AND R1
SA103	S3 AND R1
SA105	S4 AND R1
SA107	S2 AND R1
SA109	S3 AND R2
SA111	S4 AND R2
SA113	S1 AND R2
SA115	S3 AND R2
SA117	S4 AND R2
SA119	S1 AND R2
SA121	S4 AND R2 S1 AND R2 S3 AND R2
SA123	S4 AND R2
SA125	S1 AND R2
SA127	S2 AND R3
SA129	S4 AND R3
SA131	S1 AND R3
SA133	S2 AND R3
SA135	S4 AND R3 S1 AND R3
SA137	S1 AND R3
SA139	S2 AND R3
SA141	S4 AND R3
SA143	S1 AND R3
SA145	S2 AND R4
SA147	S3 AND R4 .
SA149	S1 AND R4
SA151	S2 AND R4
SA153	S3 AND R4
SA155	S1 AND R4
SA157	S2 AND R4
SA159	S3 AND R4
SA161	S1 AND R4
SA163	S1 AND R4 S2 AND R1
SA165	S3 AND R1
SA167	S4 AND R1
•	•
¢ •	:
·	



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## FIG. 17A

SA1         S1           SA3         S2           SA5         S3           SA7         S1           SA9         S2           SA11         S3           SA13         S1           SA15         S2           SA17         S3           SA19         S4         AND         R1           SA21         S2         AND         R1           SA23         S3         AND         R1           SA23         S3         AND         R1           SA25         S4         AND         R1           SA25         S4         AND         R1           SA27         S2         AND         R1           SA29         S3         AND         R1           SA29         S3         AND         R1           SA31         S4         AND         R1           SA33         S2         AND         R1           SA33         S2         AND         R1           SA35         S3         AND         R2           SA41         S3         AND         R2           SA45         S1         AND	SAMPLE	SWITCHES CLOSED
SA3         S2           SA5         S3           SA7         S1           SA9         S2           SA11         S3           SA13         S1           SA15         S2           SA17         S3           SA19         S4 AND R1           SA21         S2 AND R1           SA23         S3 AND R1           SA24         SA25         S4 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA62         S2	SA1	S1
SA5         S3           SA7         S1           SA9         S2           SA11         S3           SA13         S1           SA15         S2           SA17         S3           SA19         S4           SA21         S2           SA21         S2           SA22         S3           SA23         S3           SA24         R1           SA25         S4           SA4         RND           SA27         S2           SA1         S1           SA29         S3           SA1         S4           SA29         S3           SA1         S4           SA29         S3           SA30         R1           SA33         S2           SA1         R1           SA33         S2           SA1         R1           SA35         S3           SA30         R1           SA37         S4           SA4         R2           SA41         S3           SA4         SA4           SA4 <t< td=""><td></td><td></td></t<>		
SA7         S1           SA9         S2           SA11         S3           SA15         S2           SA17         S3           SA19         S4 AND R1           SA21         S2 AND R1           SA23         S3 AND R1           SA24         SA27         S2 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA41         S3 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4		S3
SA9         S2           SA11         S3           SA13         S1           SA15         S2           SA17         S3           SA19         S4           SA21         S2           SA21         S2           SA23         S3           SA24         S2           SA25         S4           SA4D         R1           SA25         S4           SA4D         R1           SA25         S4           SA4D         R1           SA29         S3           SA4D         R1           SA29         S3           SA4D         R1           SA33         S2           SA4D         R1           SA33         S2           SA4D         R1           SA35         S3           SA36         S1           SA4D         R2           SA41         S3           SA40         R2           SA41         S3           SA45         S1           SA40         S4           SA49         S4           SA49		S1
SA11         S3           SA13         S1           SA15         S2           SA17         S3           SA19         S4 AND R1           SA21         S2 AND R1           SA23         S3 AND R1           SA25         S4 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA61         S4           SA62         S2           SA63         S1           SA65 </td <td>SA9</td> <td>S2</td>	SA9	S2
SA13         S1           SA15         S2           SA17         S3           SA19         S4 AND R1           SA21         S2 AND R1           SA23         S3 AND R1           SA25         S4 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA61         S4           SA62         S2           SA63         S1           SA65         S2           SA67 </td <td></td> <td>S3</td>		S3
SA15         S2           SA17         S3           SA19         S4 AND R1           SA21         S2 AND R1           SA23         S3 AND R1           SA25         S4 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA61         S4           SA63         S1           SA65         S2           SA61         S4           SA62         S2           SA63 </td <td></td> <td>S1</td>		S1
SA19         S4 AND R1           SA21         S2 AND R1           SA23         S3 AND R1           SA25         S4 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA79         S9 AND R3 AND R4<		S2
SA19         S4 AND R1           SA21         S2 AND R1           SA23         S3 AND R1           SA25         S4 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA79         S9 AND R3 AND R4<		S3
SA23         S3 AND R1           SA25         S4 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85		
SA25         S4 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85	SA21	S2 AND R1
SA25         S4 AND R1           SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85	SA23	S3 AND R1
SA27         S2 AND R1           SA29         S3 AND R1           SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA85         S9 AND R3 AND R4           <	SA25	
SA29       S3 AND R1         SA31       S4 AND R1         SA33       S2 AND R1         SA35       S3 AND R1         SA37       S4 AND R2         SA39       S1 AND R2         SA41       S3 AND R2         SA43       S4 AND R2         SA45       S1 AND R2         SA47       S3 AND R2         SA49       S4 AND R2         SA51       S1 AND R2         SA53       S3 AND R2         SA55       S4         SA57       S1         SA59       S2         SA61       S4         SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4         SA87       S1 AND R3 AND R4		S2 AND R1
SA31         S4 AND R1           SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA77         S2 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA87         S1 AND R3 AND R4 <td>SA29</td> <td></td>	SA29	
SA33         S2 AND R1           SA35         S3 AND R1           SA37         S4 AND R2           SA39         S1 AND R2           SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA77         S2 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA87         S1 AND R3 AND R4		S4 AND R1
SA35       S3 AND R1         SA37       S4 AND R2         SA39       S1 AND R2         SA41       S3 AND R2         SA43       S4 AND R2         SA45       S1 AND R2         SA47       S3 AND R2         SA49       S4 AND R2         SA51       S1 AND R2         SA53       S3 AND R2         SA55       S4         SA57       S1         SA59       S2         SA61       S4         SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4         SA87       S1 AND R3 AND R4	SA33	
SA37       S4 AND R2         SA39       S1 AND R2         SA41       S3 AND R2         SA43       S4 AND R2         SA45       S1 AND R2         SA47       S3 AND R2         SA49       S4 AND R2         SA51       S1 AND R2         SA53       S3 AND R2         SA55       S4         SA57       S1         SA59       S2         SA61       S4         SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4         SA87       S1 AND R3 AND R4		S3 AND R1
SA39       S1 AND R2         SA41       S3 AND R2         SA43       S4 AND R2         SA45       S1 AND R2         SA47       S3 AND R2         SA49       S4 AND R2         SA51       S1 AND R2         SA53       S3 AND R2         SA55       S4         SA57       S1         SA59       S2         SA61       S4         SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4	SA37	S4 AND R2
SA41         S3 AND R2           SA43         S4 AND R2           SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA77         S2 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA87         S1 AND R3 AND R4           SA87         S1 AND R3 AND R4	SA39	S1 AND R2
SA43       S4 AND R2         SA45       S1 AND R2         SA47       S3 AND R2         SA49       S4 AND R2         SA51       S1 AND R2         SA53       S3 AND R2         SA55       S4         SA57       S1         SA59       S2         SA61       S4         SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4		S3 AND R2
SA45         S1 AND R2           SA47         S3 AND R2           SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA77         S2 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA87         S1 AND R3 AND R4		
SA49         S4 AND R2           SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA77         S2 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA87         S1 AND R3 AND R4	SA45	S1 AND R2
SA51         S1 AND R2           SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA77         S2 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA87         S1 AND R3 AND R4		
SA53         S3 AND R2           SA55         S4           SA57         S1           SA59         S2           SA61         S4           SA63         S1           SA65         S2           SA67         S4           SA69         S1           SA71         S2           SA73         S9 AND R3 AND R4           SA75         S1 AND R3 AND R4           SA77         S2 AND R3 AND R4           SA79         S9 AND R3 AND R4           SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA87         S1 AND R3 AND R4		
SA55       S4         SA57       S1         SA59       S2         SA61       S4         SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4		<del></del>
SA57       S1         SA59       S2         SA61       S4         SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4         SA87       S1 AND R3 AND R4		
SA59       S2         SA61       S4         SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4         SA87       S1 AND R3 AND R4		
SA61       S4         SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4         SA87       S1 AND R3 AND R4		
SA63       S1         SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4         SA87       S1 AND R3 AND R4		
SA65       S2         SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4         SA87       S1 AND R3 AND R4		
SA67       S4         SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4		
SA69       S1         SA71       S2         SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4		S2
SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4		S4
SA73       S9 AND R3 AND R4         SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4	<u> </u>	S1
SA75       S1 AND R3 AND R4         SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4		S2
SA77       S2 AND R3 AND R4         SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4		
SA79       S9 AND R3 AND R4         SA81       S1 AND R3 AND R4         SA83       S2 AND R3 AND R4         SA85       S9 AND R3 AND R4         SA87       S1 AND R3 AND R4		
SA81         S1 AND R3 AND R4           SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA87         S1 AND R3 AND R4		
SA83         S2 AND R3 AND R4           SA85         S9 AND R3 AND R4           SA87         S1 AND R3 AND R4		S9 AND R3 AND R4
SA85 S9 AND R3 AND R4 SA87 S1 AND R3 AND R4		S1 AND R3 AND R4
SA87 S1 AND R3 AND R4		
	<del></del>	
I SAR9 I S2 AND R3 AND R4 I		
3.33   32 /110 NO /110 NT	SA89	S2 AND R3 AND R4

#### FIG. 17B

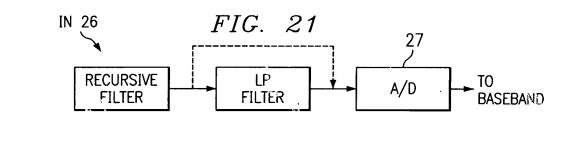
SA91	S9 AND R1
SA93	S4 AND R1
SA95	S2 AND R1
SA97	S9 AND R1
SA99	S4 AND R1
SA101	S2 AND R1
SA103	S9 AND R1
SA105	S4 AND R1
SA107	S2 AND R1
SA109	S9 AND R2
SA111	S4 AND R2
SA113	S1 AND R2
SA115	S9 AND R2
SA117	S4 AND R2
SA!19	S1 AND R2
SA121	S9 AND R2
SA123	S4 AND R2
SA125	S1 AND R2
SA127	S2
SA129	S4
<u>SA131</u>	S1
SA133	S2
SA135	S <b>4</b>
SA137	S1
SA139	S2
SA141	S4
SA143	S1
SA145	S2 AND R4 AND R9
SA147	S3 AND R4 AND R9
SA149	S1 AND R4 AND R9
SA151	S2 AND R4 AND R9
SA153	S3 AND R4 AND R9
SA155	S1 AND R4 AND R9
SA157	S2 AND R4 AND R9
SA159	S3 AND R4 AND R9
SA161	S1 AND R4 AND R9
SA163	S2 AND R1
SA165	S3 AND R1
SA167	S4 AND R1
	•
•	•
<u></u>	



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FIG. 18

SAMPLES	SWITCHES CLOSED
SA1,SA3,SA17	S1
SA19,SA21,SA35	S2 AND F.1
SA37,SA39,SA53	S3 AND R1,R2
SA55,SA57,SA71	S4
SA73,SA75,SA89	S1 AND R2,R3,R4
SA91,SA93,SA107	S2 AND R1,R3,R4
SA109,SA111,SA125	S3 AND R1,R2,R4
SA127,SA129,SA143	S4
SA145,SA149,SA161	S1 AND R2,R3,R4
•	•



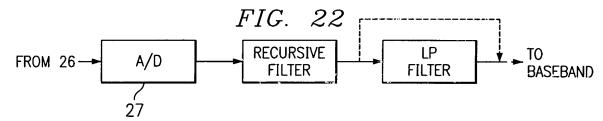
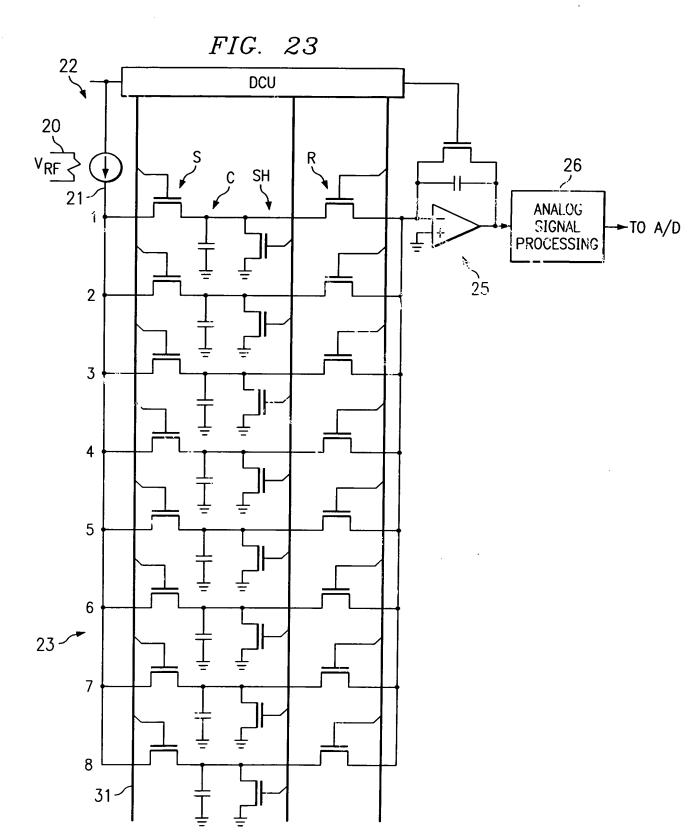


FIG. 24

SAMPLES	SWITCHES CLOSED
SA1,SA3,,SAJ-1	S1
SA2,SA4,,SAJ	S2
SAJ+1,,SA2J-1	S3 AND R1 AND R2
SAJ+2,,SA2J	S4 AND R1 AND R2
SA2J+1,,SA3J-1	S1 AND R3 AND R4
SA2J+2,,SA3J	S2 AND R3 AND R4
SA3J+1,,SA4J-1	S3 AND R1 AND R2
•	:
•	•



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V<sub>RF</sub>  $\mathscr{U}$ 

v<sub>CH,I</sub>

 $v_{\text{CH,Q}}$ 

